Replace By Art. 34

We Claim:

1. A method of manufacture of a substantially continuous circumferential coating on a non-planer substrate, said method comprising the steps of:

utilising a substantially non directional deposition technique and a substantially static substrate deposition geometry to deposit said coating.

2. A method as claimed in claim 1 wherein the coating has piezo-electric modulation characteritics.

3. A method as claimed in claim 1 or 2 wherein the coating has electro-optic modulation characteristics.

4. A method as claimed in any one of the preceding claims wherein the coating has semiconducting properties.

5. A method as claimed in any preceedinng claims wherein the coating comprises substantially Zinc-Oxide.

6. A method as claimed in any one of the preceding claims wherein the non directional deposition technique comprises chemical vapour deposition.

7. A method as claimed in claim 6 wherein the non directional deposition technique comprises single source chemical vapour deposition.

8. A method as claimed in any one of the preceding claims wherein the non-planar substrate is an optical fibre.

9. A method as claimed in claim 8 wherein at least one end of the optical fibre is clamped onto a substantially planar heating surface during the deposition.

10. A method as claimed in claim 8 wherein the optical fibre is clamped at a portion of the length of the fibre which is located at one end of a heating surface during the deposition.

11. A method as claimed in claim 8 wherein a movement of a free end of the optical fibre is limited to movement substantially along the axis of the optical fibre.

12. A receptacle for an optical fibre arranged to be used in a method of manufacture of a circumferential

coating on an optical fibre utilising a substantially non directional deposition technique and a substantially static substrate deposition geometry, said receptacle comprising:

a substantially planar heating surface;

a clamping means for clamping the substrate fibre onto the heating surface, wherein the clamping means is arranged to clamp the fibre at a portion of the length of the optical fibre which is located at one end of the heating surface during the manufacture of the coating; and

means for limiting a movement of a free end of the optical fibre to movement substantially along axis of the optical fibre.

13. An acusto-optical phase modulator having a phase modulation efficiency greater than substantially 0.25 rad/√FMW/cm.

14. An acusto-optical phase modulator having a substantially linear relationship between phase modulation and driving power for driving powers greater than 36mW.

15. An acusto-optical phase modulator as claimed in claim 13 or claim 14 including a piezo-electric modulator having a zinc oxide layer constructed substantially in accordance with the method of any of claims 1 to 11.